

STATE PLANT BOARD

UNITED STATES DEPARTMENT OF AGRICULTURE  
AGRICULTURAL RESEARCH ADMINISTRATION  
BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE  
DOMESTIC QUARANTINE NOTICES

ADMINISTRATIVE INSTRUCTIONS PRESCRIBING METHODS OF TREATMENT OF  
GRAPEFRUIT AND ORANGES UNDER MEXICAN FRUITFLY QUARANTINE

Pursuant to the authority conferred upon the Chief of the Bureau of Entomology and Plant Quarantine by § 301.64-4 (e) of the regulations supplemental to Quarantine No. 64 relating to the Mexican fruitfly (7 CFR 1945 Supp. 301.64-4 (e)), the following administrative instructions are hereby issued to prescribe methods of treatment which will meet sterilization requirements imposed under said § 301.64-4 (e) as a condition of the issuance of permits under said regulations for the interstate movement of grapefruit and oranges.

§ 301.64-4a Administrative instructions: Methods of treatment of grapefruit and oranges for the Mexican fruitfly. (a) Any of the approved vapor-heat or low-temperature methods of treatment specified in paragraph (b) of this section will meet sterilization requirements imposed under § 301.64-4 (e) as a condition of the issuance of permits for the interstate movement of grapefruit and oranges, if the treatment is conducted in a heat-treating room or refrigeration plant, as the case may be, which is located in the regulated area and is approved by the Bureau of Entomology and Plant Quarantine, and if it is conducted under the supervision of an inspector of said Bureau who at all times has access to the fruit while it is undergoing treatment. The Bureau will approve only those rooms and plants which are adequately equipped to handle and treat the fruit as provided in this section. While the results of experiments so far conducted have been successful, it should be emphasized that inexactness and carelessness in using the approved methods of treatment may result in injury to the fruit treated. In approving treatments specified in paragraph (b) of this section the United States Department of Agriculture does not accept responsibility for fruit injury.

(b) Approved methods of treatment. (1) Vapor-heat methods. In approved vapor-heat treatments the fruit is heated by saturated vapor at 110° F. which in condensing on the fruit gives up its latent heat. This latent heat is essential in assuring mortality of eggs and larvae of the Mexican fruitfly and in raising the temperature of the fruit evenly and quickly so as to prevent damage to the fruit. In practice in such treatments the saturated vapor is accompanied by a fine water mist and air admixture. The fruit is cooled immediately after treatment, and no wax or paraffin, either dry or in solution, is used until after the treatment has been completed. Vapor-heat treatments are approved only if the vapor conditions within the heat-treating room, the manner of stacking the field boxes containing the fruit in the room, and all other conditions affecting the efficacy of the treatment are satisfactory, in the opinion of the supervising inspector, to assure mortality of eggs and larvae of the Mexican fruitfly. The following methods of vapor-heat treatment, when conducted in accordance with the principles stated above in this paragraph and in paragraph (a) of this section, are approved:

(i) The temperature of the fruit shall be raised to 110° F., at the approximate center of the fruit, in a period of 8 hours and shall be held at that level during the following 6 hours. This method is adapted to sterilization plants that



do not have the capacity to increase the temperature of the fruit steeply at the beginning of the treating period.

(ii) The temperature of the fruit shall be raised to  $110^{\circ}$  F., at the approximate center of the fruit, in a period of 6 hours and shall be held at that level during the following 4 hours. The temperature of the fruit must be raised rapidly during the first 2 hours, after which it may be gradually raised to  $110^{\circ}$  F. in the following 4 hours.

(2) Low-temperature methods. The following methods of low-temperature treatment, when conducted in accordance with the principles stated in paragraph (a) of this section, are approved:

(i) The fruit shall be cooled until the temperature at the approximate center of the fruit reaches  $33^{\circ}$  F. and shall be held at or below that temperature for a period of 18 days.

(ii) The fruit shall be cooled until the temperature at the approximate center of the fruit reaches  $34^{\circ}$  F. and shall be held at or below that temperature for a period of 20 days.

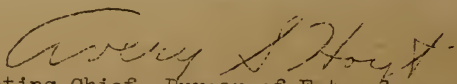
(iii) The fruit shall be cooled until the temperature at the approximate center of the fruit reaches  $35^{\circ}$  F. and shall be held at or below that temperature for a period of 22 days.

Effective date and notice of supersedure. The foregoing administrative instructions shall be effective February 1, 1949, and at that time shall supersede B. E. P. Q. No. 472 revised effective September 25, 1941 (7 CFR Cum. Supp. 301.64-4a).

The foregoing administrative instructions merely restate methods of treatment previously approved in administrative instructions now in effect and further authorize a new alternative method for use of vapor-heat which shortens the period of treatment and thereby provides a less burdensome means than any presently authorized by which shippers of grapefruit and oranges may qualify their fruit for interstate movement. Accordingly the foregoing administrative instructions relieve restrictions now in effect. Research has disclosed moreover that such new alternative method of treatment may be used without increasing the risk of spread of injurious insects. In order to be of maximum benefit to shippers of grapefruit and oranges, such new alternative method should be made available as soon as possible. Therefore, pursuant to section 4 of the Administrative Procedure Act (5 U. S. C. 1003) it is found upon good cause that notice and public procedure on the foregoing administrative instructions are unnecessary, impracticable, and contrary to the public interest, and since these instructions relieve restrictions they may properly be made effective under said section 4 less than thirty days after their publication in the Federal Register.

(Sec. 8, 37 Stat. 318, as amended, 7 U. S. C. 161; 7 CFR 1945 Supp. 301.64-4 (e))

Done at Washington, D. C., this 28th day of January 1949.

  
Acting Chief, Bureau of Entomology and  
Plant Quarantine